



23 January 2025

TO: The Department of Climate Change, Energy, the Environment and Water (DCCEEW)
RE: Review of the Coal Mine Waste Gas Method

Thank you for the opportunity to provide a submission to the Emissions Reduction Assurance Committee (ERAC) Review of the Coal Mine Waste Gas (CMWG) method.

IEEFA is an independent energy finance think tank that examines issues related to energy markets, trends, and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.

This submission is mainly concerned with the effectiveness of the existing CMWG method and the prospects for remaking it including open cut mine eligibility and displacement issues for ventilated air methane (VAM).

An expanded CMWG method could be pivotal in Australia meeting its state, national and international emissions reduction targets. With the existing scheme expiring in March 2025, there is an opportunity to remake the CMWG method to have substantial impact on Australia's emissions reductions.

Designed to provide the financial incentive to stimulate new and expanded methane abatement in the form of allocating Australian Carbon Credit Units (ACCUs), the CMWG method has a high potential value to coal miners. However, the current scheme has underperformed against expectations. With relatively low adoption, it contributes to approximately 3% of Australia's greenhouse gas (GHG) emissions reductions. To judge the performance of the scheme in the current design is to misjudge its potential.

Aimed to stimulate new abatement that would otherwise not have occurred, the ACCU's can play a pivotal role in the delicate early stages of abatement technical maturity, such as with VAM abatement and open cut pre-drainage. Both of these aspects must be prioritised in a redesigned or remade scheme.

Broadening the method to include open cut mines would stimulate the highest-emitting open cut mines to follow in the footsteps of the South Walker Creek open cut mine and examine the methane resources present in their coal mines.

In underground mines, Scope 1 emissions reductions can be met through traditional methods such as flaring and gas drainage. However, the opportunity to abate underground mines has peaked – at about 25% of the emissions amenable to traditional abatement. The remainder is largely in the ventilation air. VAM abatement technologies have been piloted at a number of Australian mine sites.



In the coming years we should see increased emissions disclosures and reporting in mining, such as with ASIC's mandatory climate-related financial disclosures and planned updates to Australasian Joint Ore Reserves Committee (JORC) reporting. The CMWG method can add measurement rigour.

Methane abatement activity in Australian coal mining has stalled - with activities covering about 15% of all coal mine methane emissions. A remade CMWG method that embraces open cut mines and VAM abatement could stimulate new abatement measures and technologies as well as complementing the government's Safeguard Mechanism.

Kind regards,

Andrew Gorringer, Energy Finance Analyst – Australian Coal, IEEFA



Introduction

The Coal Mine Waste Gas (CMWG) method falls under the Australian Carbon Credit Unit (ACCU) scheme. It is due to expire on 31 March 2025. The aim of this submission is to assist in informing whether the method should be remade and if so on what basis.

Recommendation 1 (Question 1)

Remake the method with broader inclusion and simpler eligibility, signalling value for miners to engage

The DCCEEW is proposing that ACCU methods with no active projects will not be remade upon expiry. Otherwise, the Department will review the current and likely future uptake and abatement potential and whether they meet the legislated-for Offsets Integrity Standards (OIS).

According to the CMWG Consultation Paper, only 15 active projects remain from the 26 that have been registered under the method. Of these, 13 are power generation and two are methane-flaring projects. To date the projects have generated over 2.8 million ACCUs. In FY2023/24, 0.648 million tonnes (Mt) worth of ACCUs were issued under the method. This represents only 3.2% of the total coal mine emissions in 2023, or 3.5% of the total ACCUs issued across all forms of emissions abatement in Australia in FY2023/24. In the most recent allocation, 641,000 ACCUs were issued for FY2024/25.

In 2024/25 the projects registered are managed by just six operators. This concentration reflects the specialist skills and expertise that operate these facilities, which are typically undertaken by service providers on behalf of the coal miners. The scheme needs to provide appeal to service providers to support innovation and early stage implementations.

Other barriers include the fact that, due to the scale of financial returns available from abatement – at a fraction of coal sales income – it fails to attract attention of the miners. Moreover, the potential risk to production or operations from the introduction of an additional system within the mine production system could be viewed to outweigh the perceived benefits of the project. This is particularly the case in periods of high producer profits on record high coal prices – as has recently been the case – where the prime focus is on production volume.

In more ‘normal’ periods of profitability, the miner may be more likely to perform a thorough examination of the profit maximisation opportunities, including methane abatement. Miners will look to aggregate all revenue streams into the investment evaluation, from ‘hard’ benefits such as gas sales or electricity purchase savings, to ‘soft’ considerations such as carbon markets.

When considering the financial benefit of ACCUs, attaching a value to this can be difficult. With shallow carbon markets in Australia and future uncertainties, this can discount the value ascribed, or they only become part of the ‘high’ case investment proposal.



This is likely to improve as carbon markets mature in Australia and both the price and value of Safeguard Mechanism credits and ACCUs become more transparent.

Certainly, in other regions carbon pricing revenue has driven methane reduction activity (both voluntary and mandatory). In the US, revenue from voluntary carbon markets and from California's cap-and-trade market have played a key role in driving methane capture projects in abandoned coal mines.¹ In China, access to international carbon markets through the Clean Development Mechanism (CDM) supported the implementation of VAM abatement projects.²

Compounded by complex eligibility rules in the ACCU scheme, the coal miner may overlook opportunities that are not widely understood or accepted. It may fail to attract adequate attention within the strategic prioritisation and capital allocation processes of the coal mining company.

It is important to maintain credibility of the carbon credits under the ACCU scheme. One component of the OIS is avoidance of double-counting. Credits should not be issued for the same emissions reductions twice, ensuring that Safeguard Mechanism facilities would not be able to get 'double credits' from the regulatory cross-over.

Nonetheless, miners will need to consider the multiple potential income streams in the abatement investment case, such as extracting the energy value from the methane captured as well as receiving carbon credits for its destruction.

Improving access to the CMWG scheme to third parties who might champion abatement innovation and projects on behalf of miners will be important for its success.

Question 1: The impact of regulatory and other changes since 2015 that may influence the additionality of new projects under the method

The ACCU scheme is an important part of the decarbonisation tools for Australia to achieve net zero by 2050. Given a remade and broad-based ACCU scheme, in conjunction with other policies and incentives, abatement at coal mines could reach 50% in the next 10 years. A remade CMWG method with broader scope could well tackle emissions reductions across both open cut and underground coal mines.

Australian governments are reliant on the effectiveness of this framework if they are to achieve state and federal legislated emission reduction targets and meet international commitments. Australia has a federal GHG emissions reduction target of 43% below 2005 levels by 2030 and has signed on to the Global Methane Pledge, committing to reduce methane emissions by 30% by 2030, on 2020 levels.

¹ Berkeley Lab. [Abandoned coal mines methane reduction. Lessons from the United States](#). October 2023. Page 13.

² UNECE. [Case study: VAM – China](#).



Australia's existing policy framework such as the Safeguard Mechanism is ineffective on its own. Following the Safeguard Mechanism reform in 2023 there is no evidence that coal miners took any actions or re-allocated any capital to methane abatement as a result of the reform.

Miners have not responded to the Safeguard Mechanism by allocating capital to abatement, instead preferring to offset emissions, with purchased carbon credits if required. Methane emissions will continue to rise as Australian governments continue to approve new and expanded coal mines. A remade ACCU scheme is much needed.

Recommendation 2 (Questions 8-11)

Make open cut mines' methane abatement activities, such as flaring and electricity production, eligible activities

Administered by the DCCEEW, the CMWG scheme is available only to underground coal mines. The Department believed abatement in open cut mines would cause more emissions than it saved, arguing that: "the volume of emissions released per year from an open cut mine with no pre-drainage was likely to be less than the emissions created from a project that used pre-drainage to extract the methane faster than it would otherwise have been released." This submission seeks to challenge this position.

A widely accepted dogma in coal mining is the unsuitability of gas drainage or methane abatement in open cut mines. Shallower than underground mines, they are generally considered to contain little or no methane. As such, they have not featured in past schemes and suffer from a lack of the regulatory oversight that underground coal mines receive.

Without a regulatory requirement to perform pre-drainage, open cut mines would not seek to undertake such costly activity unless there were some financial benefits.

Case study: South Walker Creek mine

Stanmore Resources will host the first open cut mine pre-drainage of methane program in Australia at its South Walker Creek (SWC) mine. This project demonstrates some key facts that help inform the issue of pre-drainage in open cuts.

For example, the project development application outlines that the project will cause a net reduction in emissions – the first principle for consideration by DCCEEW. The project has also resulted in additional data and models, which improve methane measurement and verification.

The gas drainage program will be substantial, as outlined in its 2024 Environmental Authority amendment application and its supporting GHG assessment.^{3,4} The program outlines a network

³ Stanmore. [ENVIRONMENTAL AUTHORITY AMENDMENT APPLICATION SUPPORTING INFORMATION](#). September 2024.

⁴ Stanmore Resources. [South Walker Creek Mine Multi-Year Exploration Program and Gas Drainage Project. Greenhouse Gas Assessment](#). 19 September 2024.

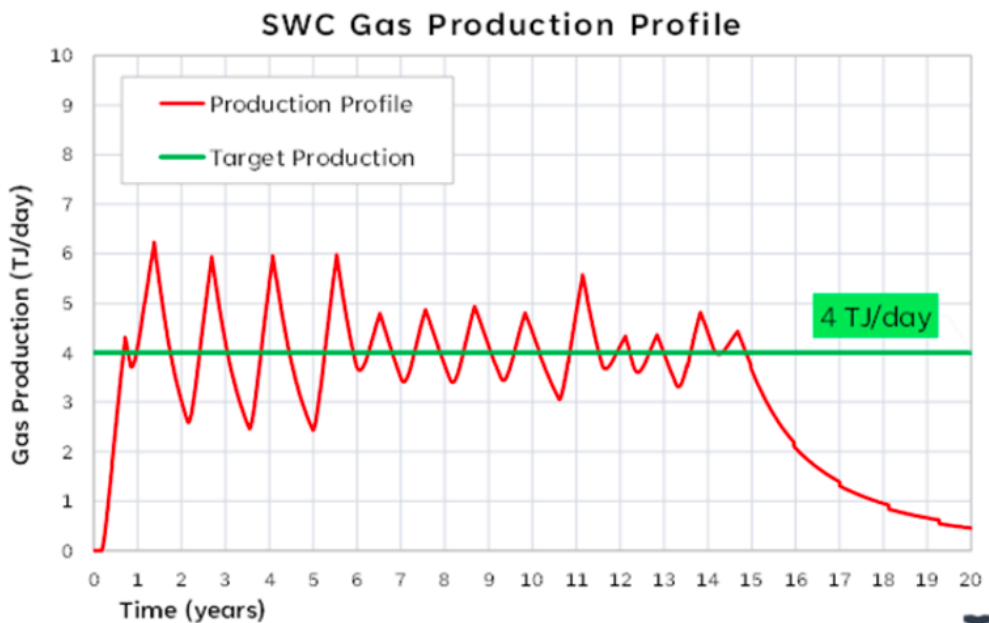


of 13 gas drainage wells targeting the coal seams over a 15-year project life. The extracted gas will be fed to a 20 megawatt (MW) gas-fired power station to generate electricity for the mine site.

The project will also see excess methane gas being flared (i.e. destroyed) during maintenance periods for the power station equipment.

The SWC power station is anticipated to require a gas supply of approximately 4 terajoules (TJ) per day from the gas drainage plan, as indicated in the indicative drilling schedule (Figure1).

Figure 1: South Walker Creek (SWC) pre-drainage profile.



Sources: Stanmore (Figure 3-11 Indicative Gas Production Profile).

The gas production profile demonstrates one of the practical aspects of utilisation of waste gas. Installed utilisation capacity can approximate the gas supply coming from the mine, but some excess will remain, and some underutilisation is to be expected (i.e. peaks and troughs are inevitable).

Nonetheless, the gas studies undertaken have confirmed that SWC mine has sufficient methane to operate a 20MW power station for at least 15 years. Notably, as part of the gas power station development application, it assessed the net change from pre-drainage of gas and use in power generation to be a net reduction of approximately 647,000 tonnes of CO₂e per annum.

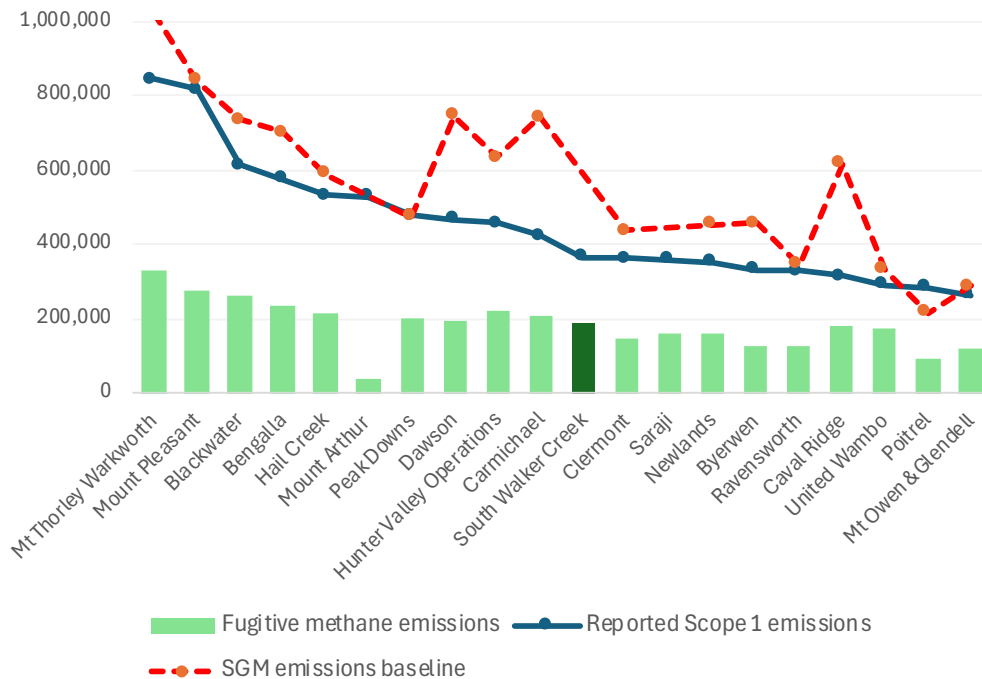
This fact should satisfy the DCCEEW concern that the activity would cause more emissions than it saves.



Current methane emissions reporting

IEEFA has reviewed the GHG emissions profile of the top 20 open cut mines in Australia. These account for 72% of the reported Scope 1 emissions in coal mines in the Safeguard Mechanism, using the most recent published 2022/23 data.

Figure 2: Top 20 open cut emitters.



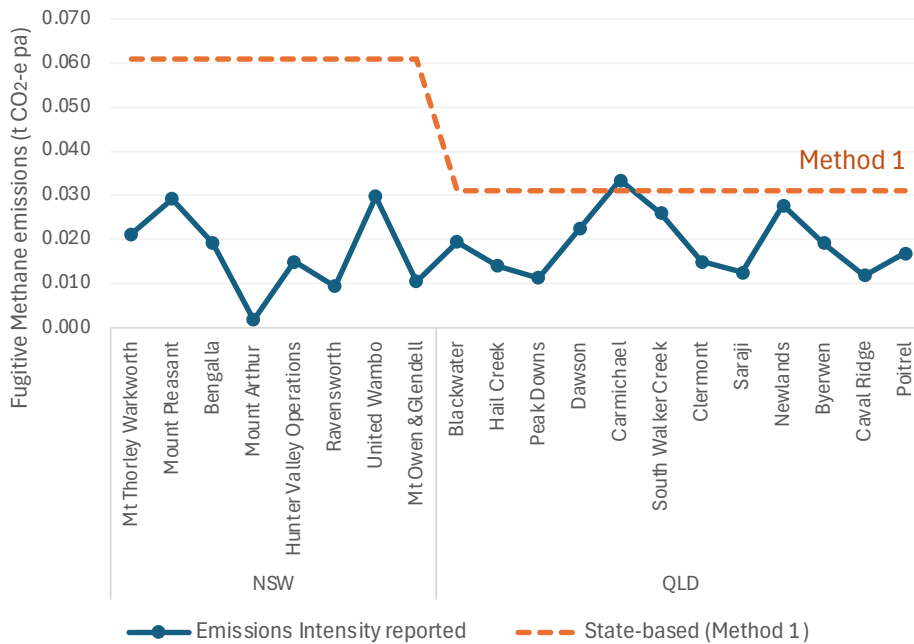
Sources: 2022/23 Safeguard Mechanism Reporting; company reports; Common Capital; IEEFA.

Figure 2 indicates that for the vast majority of open cut mines, there is significant headroom between Safeguard Mechanism baseline and reported emissions.

Recent moves to transition remaining miners from Method 1 to Method 2 could see this gap widen further in future. For example, when Mount Arthur moved from the state-based emissions factor to a self-assessed Method 2, its reported emissions intensity miraculously fell by a factor of 32. This discrepancy for the top 20 open cut emitters against the default emissions intensity factors of 0.061 and 0.031 tCO₂-e/ROM t for NSW and QLD respectively compared to what is being reported (mostly under Method 2) is shown in Figure 3.



Figure 3: Wide discrepancy between reported fugitive methane and state-based Method 1



Sources: 2022/23 Safeguard Mechanism Reporting; company reports; Common Capital; IEEFA.

Emissions reductions at open cut mines in Australia are unmoved by the Safeguard Mechanism, as it is unlikely to incentivise pre-drainage at mine sites.

- There is a substantial baseline headway gap at most open cut mines.
- Baselines might increase in future for open cut mines, as targets incorporate a 50:50 split between the industry average and a facility’s site-specific emissions intensity. This shifts the burden of reductions to underground mines.
- Potential for decarbonisation of diesel mining equipment fleets will provide plentiful emissions reductions opportunities.
- Any remaining emissions reductions might be easier to offset by purchasing Safeguard Mechanism Credits.

Therefore, including this activity in the CMWG method as well as being included in the Safeguard Mechanism would not conflict with OIS.

Gas potential

Perhaps more interesting is that the SWC mine is placed about midway in the top 20 list of emitters. So, a mine that on the one hand reports relatively low fugitive methane emissions (184,685 tonnes of CO₂e in 2022/23) can on the other hand have been determined to have sufficient gas drainage capacity of 4TJ/day, to power a 20MW power station for 15 years.



If this same production capacity were simply extrapolated across these top 20 open cut mines, there would be an aggregate 400MW of power generation capacity. Put another way, extrapolating the gas production rate from SWC across the top 20 mines would see a gas production capability of 80TJ/day, or about 10% of what the Australian Energy Market Operator (AEMO) predicts will be southern Australia's entire gas output (740TJ/d) in 2028.⁵

There is likely to be some tempering of this massive potential. Only a subset of these top 20 emitters that would provide the highest emissions reduction and gas drainage potential in the next 10 years. Advancements in innovation in satellite and remote monitoring, such as with Open Methane platform, will help guide the targeting of which mines provide the greatest opportunities. Opening the CMWG method up to include open cut activities will provide incentive for miners to investigate and adopt such measurement technologies.

The Safeguard Mechanism reforms have been ineffective for open cut coal mine abatement. A 2023 review by Energy & Resource Insights found that six of the top 10 coalmines in Australia – the major open cut coalmines – have no effective emissions limits under the scheme. Instead, they will be allowed to increase their emissions due to increasing baselines.⁶

Given the lack of incentives in the Safeguard Mechanism for open cut mines abatement, and the government's willingness to continue approval of new and expanded open cut coal mines, the ACCU could be the only answer to abating emissions from these mines.

Question 8: Would including open cut mines as eligible sites be likely to result in overall abatement on a year-by- year basis?

A 2023 report, *Methane Tracking Technologies Study*, by Rystad found costs for open cut gas drainage and utilisation at about A\$15/tonne of CO₂e on average, net of methane sales revenues and/or utilisation benefits.⁷ This is well below the typical ACCU price, which is understood to exceeded A\$30/tonne of CO₂e over the long term.

The crediting of ACCUs for open cut coal mine pre-drainage could lead to real abatement in open cuts for the first time.

Without abatement, reducing coal mine methane in Australia will require a reduction in coal production. This is the opposite of what is happening. Australia has one of the biggest pipelines of new or extended coalmines awaiting approval of all coal-exporting countries, and most of these projects (23 out of 31 remaining) are for open cut coal mines.⁸

In 2024, the federal government approved seven new or expanded coal mines. Of these, four are open cuts [Mount Pleasant, Boggabri, Caval Ridge and Vulcan South], and one is an open cut / underground complex [Lake Vermont Meadowbrook]. In addition, on 14 Jan 2025 the open cut

⁵ Argus Media. [Viewpoint: Australia edges towards LNG imports in 2025](#). 7 January 2025.

⁶ Energy & Resources Insights. [Money for nothing: Australia coal mines under the reformed safeguard mechanism](#). October 2023.

⁷ Rystad. [Methane Tracking Technologies Study](#). 18 October 2023.

⁸ IEEFA. [Coalmine approvals: Are governments up to the task?](#) 1 November 2024.



New Acland mine was cleared for approval of its Stage 3 expansion, following discontinuation of a legal challenge in the land court.

South Walker Creek (SWC) mine in Queensland intends to commence the first production-scale pre-drainage operation in Australia to power a 20MW gas fired power generator, thanks largely to funding under Queensland's Low Emissions Investment Partnerships (LEIP).

Extrapolating the gas production of SWC to other large open cut mines demonstrates the high potential amount of gas that is available for abatement in Australia. Such activity is unlikely to be motivated by the Safeguard Mechanism. Its design favours open cut mines, most mines emissions are well below baselines, baselines are increasing, and miners intend to rely on purchasing offsets if required to reduce emissions. Therefore, inclusion of open cuts in a remade CMWG method is likely to meet additionality requirements and enable avoidance of double-counting with the Safeguard Mechanism.

Pre-drainage should be considered for both existing coal mines and for new coal mine projects such as the recently announced approvals.

Question 9: What modelling and measurements would have to be done to calculate the expected emissions in the normal course of events vs abatement from a project on a year-by-year basis. Would it be appropriate to use the NGERS Method 2 modelling approach to calculate baseline emissions from open cut mines?

Currently open cut mines do not require detailed gas estimation techniques. This is the case for both approvals and in operation.

In some approvals, the development of an independent third-party gas reservoir model and feasibility study has been suggested as a condition of the approval – to be undertaken post mining approval. However, no such preliminary requirements exist for new mine projects seeking approval. Yet the mine design phase is when opportunities for gas pre-drainage and installing power generation are best considered.

Methane emissions in coal mining is estimated using a variety of NGERS [National Greenhouse and Energy Reporting scheme] methods in Australia, depending on the type of mine and the preference of each facility. For open cuts, coal miners may choose which to apply among three methods. A 2024 review of the NGERS methods recommended phasing out the use of Method 1 for open cut coal mining and investigation of the use of Method 2.

There is no regulatory requirement in Australian methane reporting to consider either verification or reporting by the use of satellites or remote sensing methods. This is despite recent advances in these methods that indicate a potential high under-reporting of methane emissions, particularly in open cut coal mining.



Method 2 should be phased out in preference for Method 3 or 4 or a satellite hybrid approach. However, the question of whether it is appropriate to use Method 2 reporting under the ACCU scheme should be considered in concert with NGERs requirements and ongoing reforms. In addition, Scope 1 and Scope 2 emissions should be reported separately (as well as Scope 3 emissions) which will all assist in minimising instances of double counting of emissions.

There is no doubt that remaking the CMWG method to include open cuts could enable higher-order measurements of methane volumes captured and abated as well as improved gas reservoir models and gas production forecasts. This might in turn provide opportunities for NGERs reform and other state policies and guidelines.

For carbon credits, consideration might be given to the establishment of a methane specific sub-market. If credits were earned for avoidance or abatement of methane specific emissions, rather than converting methane to a carbon equivalent credit, this would prevent miners from using land-based carbon credits to offset their methane emissions to comply with the Safeguard Mechanism.

Question 10: What would be the expected uptake of projects and abatement if open cut mines were eligible sites?

IEEFA estimates that the top 12 open cut coal mines release about half of the methane emissions from open cut coal mines in Australia. The top 20 open cuts contribute about 75%. How many of these mines and new projects would implement abatement depends on a range of factors.

The scale of the benefits would be impacted by the volume of methane emissions either measured through the CMWG method or else impacted by evolution of NGERs and other evolving technologies. The value of the ACCUs will be impacted by future carbon ambition and the rigour of the market mechanism to accurately price carbon activities.

On the utilisation of methane there are upper limits to manage the peaks and troughs in gas production such as evident for SWC, due to infrastructure sizing requirements. Other factors that have an impact on the cost of the project might include:

- The pre-drainage lead times required in relation to the mine plan period progression, including mines that may be nearing end of life;
- In-situ gas content levels and the techniques to stimulate gas production in zones of low permeability;
- Methane concentration levels present in gas drainage for power generation (typically higher than 30% concentration needed);
- Safety considerations for drainage and flaring for methane concentrations less than 30%, given methane combustibility; and

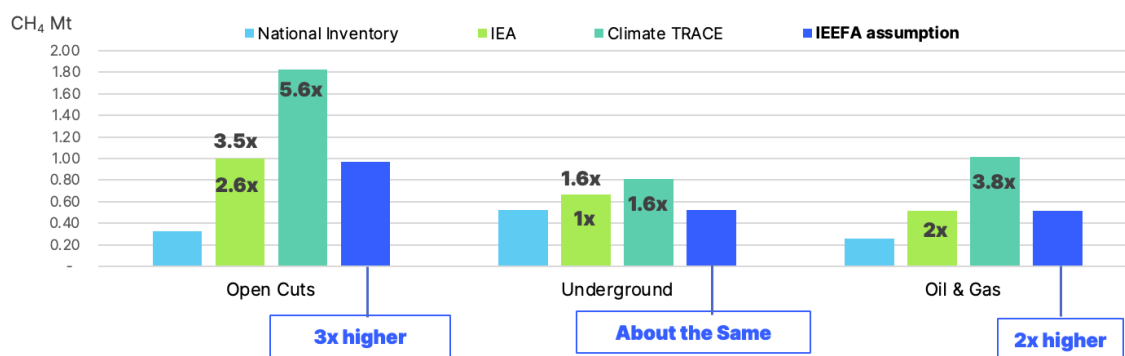
- Advancements in gas drilling and drainage techniques, such as has been experienced with the advent of directional drilling, improving the productivity of surface-to-in-seam drilling.

IEEFA has identified 20 existing open cut coal mines (Figure 2) which could be amenable to gas pre-drainage. New technology such as the Open Methane platform will help in drawing attention to and helping prioritise mines for abatement.

Question 11: Any other evidence to support the inclusion of open cut mines as eligible sites if the method were to be remade?

Australia risks missing its emissions goals if its policies are ineffective or if measurements prove to be inaccurate. Both of these are possible in the current setting.

Figure 4: Estimates of methane emissions underreporting



Sources: Department of Climate Change, Energy, the Environment and Water (DCCEEW); IEA; Climate TRACE; IEEFA.
Note. The IEA does not report on underground and open-cut mine methane estimates separately; IEEFA considered a range of underreporting factors based on underground emissions varying between reported levels and Climate TRACE levels

There is a high level of uncertainty around actual methane emissions in fossil-fuel production. On current reporting, underground mines make up at least 60% of Australia's reported coal mine emissions. There is a high potential for underreporting of methane emissions in open cut coal mines, with satellite and emerging technologies pointing to this, and the prospect of direct measurement and developed gas models undertaken as part of a remade CMWG method. There is the risk that underground emissions, covered in the current method, could fall to about a 1/3 share of coal mine methane emissions.

With underground mines the only mine type eligible for the ACCU scheme, any uncertainty realised would further undermine the effectiveness of the scheme. This risk is heightened by the increase in recent government approvals for new open cut coal mines.



Recommendation 3

Include VAM in a remade method including for electricity generation

Of the main methane abatement methods used in underground coal mining, flaring and power generation are the main types. According to CSIRO data, approximately 25% of the underground coal mine emissions are indicated as being abated using these methods.⁹ That is about 3.4Mt of CO₂e, mainly in Queensland (2.8Mt) and NSW (0.6Mt). This represents about 15% of all the coal mine methane emissions. CSIRO categorises the remaining fugitive emissions from underground mines as ‘ventilation’ emissions, estimating approximately 11.3Mt CO₂e across NSW and QLD.

Question 13: What portion of a mine’s fugitive emissions typically come from ventilated air methane, and would this portion be expected to increase or decrease over the next 10 years?

Some estimates put the volume of VAM from underground coal mines at approximately 70%-80% of their Scope 1 emissions.¹⁰ While Australia has had a number of trials or pilot projects for VAM abatement, including with technology support from CSIRO, there are currently no production-scale units in operation in Australia. China is a global leader in VAM abatement, with 13 operational projects, and is moving to make VAM abatement compulsory.¹¹

According to data from CSIRO, of the fugitive emissions from underground coal mines, approximately 3.4 million tonnes per annum (Mtpa) of carbon dioxide-equivalent (CO₂e), some 25% of underground emissions – are indicated to be mentioning abatement via flaring or electricity generation. Publicly available information is scant however it appears that to increase abatement in underground mines, the main source of emissions needs to be addressed: VAM.

First added to the CMWG method in 2016, VAM has not proven economically viable to implement on any production scale in Australia. In the absence of regulation (such as is being rolled out in China), Australian miners may consider it to be too costly. Whether the Safeguard Mechanism alone incentivises action remains to be seen. It is expected that most miners will view VAM abatement as a long-term investment, beyond the medium-term planning horizon. One mine, Kestrel has committed to implementing VAM abatement technology. To accelerate the uptake at other mines, the regulators need to ensure that they don’t rule-out one aspect or another from VAM-related carbon crediting. Instead, investments should be underwritten by aggregate of multiple income streams available. The scheme(s) should be supported by strong carbon reporting and accounting, to ensure the schemes remain fair and avoids double counting.

Factors impacting whether the proportion would be expected to increase or decrease over the next 10 years would depend on factors such as the coal mine development life cycle, with VAM

⁹ CSIRO. [Compilation of data related to Australian coal-mine fugitive emissions](#). 3 September 2024.

¹⁰ US Environmental Protection Agency. [Sources of Coal Mine Methane](#). 27 August 2024.

¹¹ Institute For Governance & Sustainable Development (IGSD). [China proposed strengthened regulatory action and additional market measures to mitigate coal mine methane emissions](#). 30 July 2024.



abatement occurring during the operating phase of coal mines, and gas pre-drainage occurring mostly in advance of and during coal mine production.

Recent underground coal mine developments such as the restart of North Goonyella (Centurion project), the approval of Narrabri underground into the gassy southern domain, and the approval of Lake Vermont underground mine, will all create additional pre-drainage and ultimately VAM. The potential restart of the Grosvenor underground mine would also impact VAM levels.

The Kestrel underground mine in Queensland will potentially be the first mine in Australia to launch a commercial-scale VAM abatement operation. Announced in 2024, with the assistance of government funding, the scale and extent of the project remains to be publicly disclosed.

Other underground mines that consider VAM abatement will typically be operating a gas-drainage abatement project, such as with flaring or power generation. Hence there are multiple sub-projects involved in overall emissions abatement at the mine site. Absent other such funding incentives sufficient to kick-start these projects, the design of the CMWG method needs to ensure simplicity while still providing incentives.

Miners may choose to implement these projects to meet their emissions reduction requirements under the Safeguard Mechanism – either through compliance with reducing emissions baselines or purchasing or earning Safeguard Mechanism Credits (SMCs). If the same emissions reductions are then claimed under the CMWG method, then this could lead to double counting.

The regulator, in enforcing OIS, will need to consider introducing accounting for each abatement project or sub-project. For example, whether the project is contributing to its Safeguard Mechanism compliance or is additional. Moreover in doing so, to distinguish between activities which are energy generation vs methane destruction. This is currently done for mine drainage and power generation, where ACCUs are only credited for the electricity production benefit, where methane is captured and used to generate power for the mine site or grid, in displacement of fossil fuel-based electricity. As the grid becomes decarbonised, these benefits could be expected to diminish.

In contrast, the Scope 1 methane emissions captured by gas drainage (and conversion to lower emissions CO₂) in underground mines is not credited in the ACCU scheme – as this is determined as being required under the Safeguard Mechanism already.

In future, and for VAM projects, clear boundary distinctions will need to be made for project eligibility under the ACCU scheme. While avoidance of double counting is a requirement, its pursuit should not lead to gaps or missed opportunities in progressing new and expanded CMM abatement technology, such as with VAM.

As for emissions reporting generally in the fossil fuel space there needs to be additional resources applied to measurement (including new tech), new reporting and carbon accounting systems established and independent verification to ensure the system remains fair and inclusive.



Recommendation 4 (Question 14 and 15)

The scheme should be remade and improved

Question 14: any other suggestions to improve the CMWG method, in the event the decision is taken to remake it.

The scheme should be non-discriminatory, encouraging other gas utilisation activities such as gas sales, compression for powering haul trucks, chilling for underground air ventilation, novel catalytic systems to oxidise methane in low concentrations, or chemical conversion opportunities such as low-carbon hydrogen or ammonia production.

Question 15: The potential uptake of the CMWG method in terms of number of projects and ACCUs in the next 10 years if the method is remade?

Remaking the CMWG method for the next 10 years could have a large impact on coal mine methane abatement, and on Australia reaching its net zero and interim emissions reduction targets. A remade method with an expanded scope to fully incorporate open cut coal mines and VAM abatement would complement existing government policies and could incentivise action toward achieving a goal of 50% coal mine methane abatement, up from about 15% currently.

In remaking the method, eligibility criteria and crediting value could be made simpler and more transparent, increasing its uptake with coal miners.

The actual number of projects requires further analysis, including the potential for multiple 'sub-projects' within a mine site, as well as potential regulatory overlap with other crediting schemes.

IEEFA considers that a complementary ACCU CMWG method is necessary in the absence of government regulation mandating coal mine methane abatement. Abatement activities have stalled at historical levels and new (unabated) mines are being approved at a rate of knots.

A broad and encompassing scheme would disappoint if it didn't incentivise at least 12 new open cut coal mines and a further 12 underground coal mines in the coming 10 years.

Existing ACCU projects' technologies are relatively mature, such as flaring and power generation. New advancements in abatement in open cuts and VAM technologies will improve accessibility. The rate of innovation and associated skills and expertise are expected to materialise faster over the 10 years than for traditional activities.

The importance of the next 10 years is critical. The remade CMWG method could play a pivotal part in filling the gaps in the Safeguard Mechanism. Without a broader CMWG method and in the face of continued federal approvals for new or expanded coal mines in Australia, emissions reductions targets may well lie out of reach.